Exp Mail Label No.: EL025156349US Date of Deposit: June 18, 1999

-1-

SEQUENCE LISTING

5	<110> Van Snick, Jacques Lethé, Bernard Chaux, Pascal Boon-Falleur, Thierry van der Bruggen, Pierre													
10	<120> MAGE-A1 PEPTIDES PRESENTED BY HLA CLASS II MOLECULES													
	<130> L0461/7063													
15	<160> 72													
	<170> FastSEQ for Windows Version 3.0													
	<210> 1													
20	<211> 1624													
	<212> DNA													
	<213> Homo sapiens													
	<400													
25		gacaggccaa					60							
		tctgcctgtg					120							
		gagtcatcat					180 240							
		cccaacaaga tggtcctggg					300							
30		ctcagggagc					360							
		agggttccag					420							
		tccgagcagt					480							
		gagccaggga					540							
		actgttttcc				_	600							
35		acgtgaagga					660							
	ctaggtctct	cctatgatgg	cctgctgggt	gataatcaga	tcatgcccaa	gacaggcttc	720							
	ctgataattg	tcctggtcat	gattgcaatg	gagggcggcc	atgctcctga	ggaggaaatc	780							
	tgggaggagc	tgagtgtgat	ggaggtgtat	gatgggaggg	agcacagtgc	ctatggggag	840							
40		tgctcaccca					900							
		atcccgcacg					960							
		aagtccttga					1020							
		gtgaagcagc					1080							
		gtgggaggg					1140							
45		cgtgtgacat					1200 1260							
		tttctgttct					1320							
	=	gtttttttt cacacagttc					1320							
		atccattcta					1440							
		aaaaatgagc				_	1500							
50		ttgccttata	_		_		1560							
		cttggcttct					1620							
	teet	33	5 5 7 7 5	3 3 · · · ·	J	-	1624							
	<210:	> 2												

<210> 2 <211> 309

55 <212> PRT

<213> Homo sapiens

	15
And the state of t	20
	25
	30
	35
	40

		- 4	100>	2												
	Met 1		Leu		Gln 5	Arg	Ser	Leu	His	Cys 10	Lys	Pro	Glu	Glu	Ala 15	Leu
5	Glu	Ala	Gln	Gln 20	Glu	Ala	Leu	Gly	Leu 25	Val	Cys	Val	Gln	Ala 30		Thr
	Ser	Ser	Ser 35	Ser	Pro	Leu	Val	Leu 40	Gly	Thr	Leu	Glu	Glu 45	Val	Pro	Thr
		50	Ser				55					60				
10	65		Thr			70					75					80
15			Arg		85		_			90		_			95	
			Arg	100				_	105			_		110	_	
			115					120					125			
20		130	Ser			_	135	_	_		_	140				
	145	-	Ala			150					155	_		_		160
			Asp Tyr		165	_			_	170				_	175	_
25			Leu	180				_	185					190	_	
	_		195 Glu					200					205	_	_	
30		210	Arg				215					220				
30	225	_	Leu			230		_	_		235		_			240
		_	Pro		245		_	_		250	_	_			255	
35		-	Ser	260	_	-			265	_	_			270		
			275	_				280					285			Glu
40		290	Glu				295					300				
	305															
	<210> <211>															
45			212> 213>		o saj	piens	5									
	<400>		3													
50	Val 1	Lys	Val	Leu	Glu 5	Tyr	Val	Ile	Lys	Val 10	Ser	Ala	Arg	Val	Arg 15	Phe
		<2	210>	4												
			211>													
55			212> 213>		o saj	pien	3									
		< 4	400>	4												

- 3 -

```
Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe Phe Pro Ser
                                             10
              <210> 5
    5
              <211> 12
              <212> PRT
              <213> Homo sapiens
              <400> 5
        Glu Thr Ser Tyr Val Lys Val Leu Glu Tyr Val Ile
   10
         1
              <210> 6
              <211> 12
   15
              <212> PRT
              <213> Homo sapiens
              <400> 6
        Val Lys Val Leu Glu Tyr Val Ile Lys Val Ser Ala
   20
              <210> 7
              <211> 12
              <212> PRT
              <213> Homo sapiens
   25
              <400> 7
        Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe
13
                         5
  30
              <210> 8
-2
<211> 12
               <212> PRT
               <213> Homo sapiens
Ð
   35
              <400> 8
        Lys Val Ser Ala Arg Val Arg Phe Phe Pro Ser
    40
               <210> 9
               <211> 12
               <212> PRT
               <213> Homo sapiens
    45
               <400> 9
         Arg Val Arg Phe Phe Phe Pro Ser Leu Arg Glu Ala
                          5
               <210> 10
    50
               <211> 12
               <212> PRT
               <213> Homo sapiens
               <400> 10
    55
         Phe Phe Pro Ser Leu Arg Glu Ala Ala Leu Arg Glu
                          5
```

```
<210> 11
                <211> 13
                <212> PRT
                <213> Homo sapiens
     5
                <400> 11
          Leu Arg Glu Ala Ala Leu Arg Glu Glu Glu Gly Val
    10
                <210> 12
                <211> 36
                <212> DNA
                <213> Homo sapiens
    15
                <400> 12
                                                                                     36
          gagtatgtga tcaaggtcag tgcaagagtt cgcttt
                <210> 13
                <211> 16
DOBEDOL TODECDO
    20
                <212> PRT
                <213> Homo sapiens
                <400> 13
          Tyr Val Lys Val Leu Glu His Val Val Arg Val Asn Ala Arg Val Arg
    25
                                                10
                <210> 14
                <211> 16
                <212> PRT
    30
                <213> Homo sapiens
                <400> 14
          Leu Glu His Val Val Arg Val Asn Ala Arg Val Arg Ile Ala Tyr Pro
     35
                <210> 15
                <211> 9
                <212> PRT
                <213> Homo sapiens
     40
                <400> 15
          Glu Ala Asp Pro Thr Gly His Ser Tyr
     45
                <210> 16
                <211> 9
                <212> PRT
                <213> Homo sapiens
     50
                <400> 16
          Ser Leu Phe Arg Ala Val Ile Thr Lys
                 <210> 17
     55
                 <211> 9
                 <212> PRT
```

<213> Homo sapiens

```
<400> 17
         Asn Tyr Lys His Cys Phe Pro Glu Ile
     5
                <210> 18
                <211> 10
                <212> PRT
                <213> Homo sapiens
    10
                <400> 18
         Glu Val Tyr Asp Gly Arg Glu His Ser Ala
          1
               <210> 19
    15
               <211> 10
               <212> PRT
               <213> Homo sapiens
               <400> 19
20
         Arg Glu Pro Val Thr Lys Ala Glu Met Leu
          1
               <210> 20
               <211> 9
    25
               <212> PRT
               <213> Homo sapiens
ij
               <400> 20
Asp Pro Ala Arg Tyr Glu Phe Leu Trp
    30
          1
                           5
               <210> 21
               <211> 9
               <212> PRT
    35
               <213> Homo sapiens
               <400> 21
         Ser Ala Phe Pro Thr Thr Ile Asn Phe
    40
               <210> 22
               <211> 9
               <212> PRT
               <213> Homo sapiens
    45
               <400> 22
         Ser Ala Tyr Gly Glu Pro Arg Lys Leu
    50
               <210> 23
               <211> 14
               <212> PRT
               <213> Homo sapiens
    55
               <400> 23
         Leu Leu Lys Tyr Arg Ala Arg Glu Pro Val Thr Lys Ala Glu
          1
                           5
                                               10
```

```
<210> 24
               <211> 10
               <212> PRT
               <213> Homo sapiens
     5
               <400> 24
         Tyr Leu Gln Leu Val Phe Gly Ile Glu Val
                                               10
    10
               <210> 25
               <211> 9
               <212> PRT
               <213> Homo sapiens
    15
               <400> 25
         Glu Val Asp Pro Ile Gly His Leu Tyr
               <210> 26
20
               <211> 9
               <212> PRT
               <213> Homo sapiens
               <400> 26
    25
         Phe Leu Trp Gly Pro Arg Ala Leu Val
नव्ये
<210> 27
               <211> 9
    30
               <212> PRT
               <213> Homo sapiens
-3
I
               <400> 27
         Lys Val Ala Glu Leu Val His Phe Leu
    35
         1
               <210> 28
               <211> 9
               <212> PRT
    40
               <213> Homo sapiens
               <400> 28
         Ile Met Pro Lys Ala Gly Leu Leu Ile
                          5
    45
               <210> 29
               <211> 9
               <212> PRT
               <213> Homo sapiens
    50
               <400> 29
         Thr Phe Pro Asp Leu Glu Ser Glu Phe
   55
               <210> 30
               <211> 10
               <212> PRT
```

```
<213> Homo sapiens
               <400> 30
         Met Glu Val Asp Pro Ile Gly His Leu Tyr
    5
               <210> 31
               <211> 14
               <212> PRT
    10
               <213> Homo sapiens
               <400> 31
         Ala Glu Leu Val His Phe Leu Leu Leu Lys Tyr Arg Ala Arg
    15
               <210> 32
               <211> 15
               <212> PRT
               <213> Homo.sapiens
   20
               <400> 32
         Thr Ser Tyr Val Lys Val Leu His His Met Val Lys Ile Ser Gly
          1
                          5
                                              10
   25
               <210> 33
               <211> 10
               <212> PRT
<213> Homo sapiens
   30
               <400> 33
         Gly Val Tyr Asp Gly Arg Glu His Thr Val
          1
               <210> 34
   35
               <211> 9
               <212> PRT
               <213> Homo sapiens
               <400> 34
   40
        Met Val Lys Ile Ser Gly Gly Pro Arg
          1
               <210> 35
               <211> 12
   45
               <212> PRT
               <213> Homo sapiens
               <400> 35
         Lys Ile Ser Gly Gly Pro Arg Ile Ser Tyr Pro Leu
   50
               <210> 36
               <211> 9
               <212> PRT
   55
               <213> Homo sapiens
               <400> 36
```

```
<210> 37
    5
              <211> 9
              <212> PRT
               <213> Homo sapiens
               <400> 37
   10
        Ala Ala Arg Ala Val Phe Leu Ala Leu
               <210> 38
               <211> 8
               <212> PRT
   15
               <213> Homo sapiens
               <400> 38
        Tyr Arg Pro Arg Pro Arg Arg Tyr
20
               <210> 39
               <211> 9
               <212> PRT
               <213> Homo sapiens
   25
               <400> 39
         Tyr Tyr Trp Pro Arg Pro Arg Arg Tyr
DEARTH
    30
               <210> 40
               <211> 11
               <212> PRT
               <213> Homo sapiens
    35
               <400> 40
         Gln Leu Ser Leu Leu Met Trp Ile Thr Gln Cys
               <210> 41
    40
               <211> 11
               <212> PRT
               <213> Homo sapiens
                <400> 41
    45
         Ser Leu Leu Met Trp Ile Thr Gln Cys Phe Leu
                           5
                <210> 42
                <211> 9
    50
                <212> PRT
                <213> Homo sapiens
                <400> 42
          Ser Leu Leu Met Trp Ile Thr Gln Cys
    55
```

Gly Leu Tyr Asp Gly Met Glu His Leu

```
<210> 43
               <211> 9
               <212> PRT
               <213> Homo sapiens
     5
               <400> 43
         Gln Leu Ser Leu Leu Met Trp Ile Thr
    10
               <210> 44
               <211> 10
               <212> PRT
               <213> Homo sapiens
    15
               <400> 44
         Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg
               <210> 45
20
               <211> 10
               <212> PRT
               <213> Homo sapiens
               <400> 45
         Leu Ala Ala Gln Glu Arg Arg Val Pro Arg
          1
               <210> 46
               <211> 9
    30
               <212> PRT
               <213> Homo sapiens
               <400> 46
         Val Leu Pro Asp Val Phe Ile Arg Cys
    35
               <210> 47
               <211> 10
               <212> PRT
    40
               <213> Homo sapiens
               <400> 47
         Val Leu Pro Asp Val Phe Ile Arg Cys Val
                           5
                                               10
    45
               <210> 48
               <211> 10
               <212> PRT
                <213> Homo sapiens
    50
               <400> 48
         Glu Val Ile Ser Cys Lys Leu Ile Lys Arg
                           5
    55
               <210> 49
                <211> 10
                <212> PRT
```

-1

<213> Homo sapiens

<400> 55

<213> Homo sapiens

```
Ser Tyr Leu Asp Ser Gly Ile His Ser
                <210> 56
     5
                <211> 9
                <212> PRT
                <213> Homo sapiens
                <400> 56
    10
         Met Leu Leu Ala Val Leu Tyr Cys Leu
                <210> 57
                <211> 9
    15
                <212> PRT
                <213> Homo sapiens
                <400> 57
         Tyr Met Asn Gly Thr Met Ser Gln Val
DOWNEDS OF TROO
    20
                <210> 58
                <211> 9
                <212> PRT
    25
                <213> Homo sapiens
                <400> 58
         Tyr Met Asp Gly Thr Met Ser Gln Val
    30
                <210> 59
                <211> 9
                <212> PRT
                <213> Homo sapiens
    35
                <400> 59
         Ala Phe Leu Pro Trp His Arg Leu Phe
    40
                <210> 60
                <211> 9
                <212> PRT
                <213> Homo sapiens
    45
                <400> 60
          Ser Glu Ile Trp Arg Asp Ile Asp Phe
                <210> 61
    50
                <211> 9
                <212> PRT
                <213> Homo sapiens
                <400> 61
    55
          Tyr Glu Ile Trp Arg Asp Ile Asp Phe
                            5
```

```
<210> 62
               <211> 15
               <212> PRT
               <213> Homo sapiens
    5
               <400> 62
         Gln Asn Ile Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro
                                              10
   10
               <210> 63
               <211> 15
               <212> PRT
               <213> Homo sapiens
   15
               <400> 63
        Asp Tyr Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
                                              10
               <210> 64
20
               <211> 9
               <212> PRT
               <213> Homo sapiens
               <400> 64
   25
        Ala Ala Gly Ile Gly Ile Leu Thr Val
          1
<210> 65
               <211> 10
   30
               <212> PRT
               <213> Homo sapiens
               <400> 65
        Glu Ala Ala Gly Ile Gly Ile Leu Thr Val
   35
               <210> 66
               <211> 9
               <212> PRT
   40
               <213> Homo sapiens
               <400> 66
        Ile Leu Thr Val Ile Leu Gly Val Leu
          1
                          5
   45
               <210> 67
               <211> 9
               <212> PRT
               <213> Homo sapiens
   50
               <400> 67
        Lys Thr Trp Gly Gln Tyr Trp Gln Val
   55
               <210> 68
               <211> 9
               <212> PRT
```

.

```
<213> Homo sapiens
               <400> 68
         Ile Thr Asp Gln Val Pro Phe Ser Val
     5
               <210> 69
               <211> 9
               <212> PRT
    10
               <213> Homo sapiens
               <400> 69
         Tyr Leu Glu Pro Gly Pro Val Thr Ala
                          5
    15
               <210> 70
               <211> 10
               <212> PRT
               <213> Homo sapiens
20
               <400> 70
         Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu
   25
               <210> 71
               <211> 10
               <212> PRT
               <213> Homo sapiens
   30
               <400> 71
         Val Leu Tyr Arg Tyr Gly Ser Phe Ser Val
               <210> 72
    35
               <211> 9
               <212> PRT
               <213> Homo sapiens
```

<400> 72

Leu Tyr Val Asp Ser Leu Phe Phe Leu

40